

**FULTON-MONTGOMERY
COMMUNITY COLLEGE
JOHNSTOWN, NEW YORK**



CATALOG 1966, 1967

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COLLEGE CALENDAR 1966-67

FALL SEMESTER

Aug. 1 Last date to apply for admission for the fall semester
Sept. 6-9 Faculty Seminars
Sept. 10 Extension Registration
Sept. 12-13 Orientation New Students
Sept. 14-15 Registration
Sept. 19 Classes begin
Sept. 23 End of late registration, last date to change courses
Oct. 21 Last date for dropping courses without academic penalty
Nov. 11 Midterm grades due
Nov. 23 Thanksgiving Recess, classes end 10 P.M.
Nov. 28 Classes resume
Dec. 16 Last date to file application for degree to be granted in June
Dec. 22 Christmas Recess, classes end 10 P.M.
Jan. 2 Classes resume
Jan. 6 Last date to apply for admission for spring semester
Jan. 16-20 Final Examinations — Extension Semester ends

SPRING SEMESTER

Jan. 23 Registration for Extension
Jan. 26-27 Registration
Jan. 30 Classes begin
Feb. 3 End of late registration, last date to change courses
March 3 Last date for dropping courses without academic penalty
March 23 Midterm grades due
April 3 Classes resume
May 31 -
June 6 Final Examinations — Extension Semester ends
June 12 COMMENCEMENT
June 12-16 Faculty Seminars and SUNY Two-Year College Conference

COLLEGE CALENDAR 1967-68

FALL SEMESTER

August 1 Last date to apply for admission for fall semester
Sept. 5 New Faculty Orientation
Sept. 6-8 Faculty Seminars
Sept. 11-13 Student Orientation
Sept. 11 Registration for Extension Classes
Sept. 15 Registration for Day Classes
Sept. 18 Classes begin
Sept. 22 End of late registration, last date to change courses
Oct. 20 Last date for dropping course without academic penalty
Nov. 10 Midterm grades due
Nov. 22 Thanksgiving Recess, classes end 10 P.M.
Nov. 27 Classes resume
Dec. 15 Last date to file application for degree to be granted in June.
Dec. 20 Christmas Recess, classes end 10 P.M.
Jan. 3 Classes resume
Jan. 5 Last date to apply for admission for spring semester.
Jan. 16 Classes end
Jan. 17-25 Final Examinations

SPRING SEMESTER

Jan. 29 Registration for Extension Classes
Feb. 1-2 Registration for Day Classes
Feb. 5 Classes begin
Feb. 12 End of late registration, last date to change courses
March 8 Last date for dropping courses without academic penalty
March 29 Midterm grades due
April 11 Spring Recess, Extension Classes will continue
April 22 Classes resume
May 13-17 Final examinations for Extension
May 31- Final Examinations
June 11 COMMENCEMENT
June 10-14 Faculty Seminars and SUNY Two-Year College Conference

STATE UNIVERSITY OF NEW YORK

THE STATE UNIVERSITY OF NEW YORK was established by the State Legislature in 1948. It includes 60 colleges and centers. At present 58 of these are conducting classes: four University Centers, two Medical Centers, ten Colleges of Arts and Science, eight Specialized Colleges, six two-year Agricultural and Technical Colleges and 28 locally-sponsored, two-year Community Colleges.

Two additional Colleges of Arts and Science, in Westchester and Nassau Counties, were established by the University's Trustees in the Spring of 1965. These colleges are in the earliest planning stages and by present plans are scheduled to accept their first classes in September of 1970.

The University offers programs in agriculture; American folk culture; business administration; ceramics; dentistry; engineering; forestry; home economics; industrial and labor relations; law; liberal arts and sciences; library science; maritime service; medicine; nursing; pharmacy; professional museum work; public administration; social work; teacher education and veterinary medicine. Its two-year programs also include nursing and liberal arts study and a wide variety of technical courses in such areas as agriculture, business, and the industrial and medical technologies.

Graduate study at the doctoral level is offered by the University at 12 of its colleges, including the University Centers and the Graduate School of Public Affairs. While graduate work can be pursued at 24 of the colleges, the programs at the majority of these colleges are now limited to the master's level. The University, however, is continuing to broaden and expand overall opportunities for advanced degree study.

Governed by a Board of Trustees appointed by the Governor, State University of New York comprises all State-supported institutions of higher education, with the exception of the four-year college of City University of New York. Each college and center of State University is locally administered. Although separated geographically, all are united in the purpose to improve and extend opportunities for youth to continue their education beyond high school.

The State University motto is: "*Let Each Become All He Is Capable of Being.*"

FULTON-MONTGOMERY COMMUNITY COLLEGE

The College was approved by resolution of the Boards of Supervisors of Fulton and Montgomery Counties on March 21, 1963.

The Board of Trustees of the State University of New York established the Community College by approval of the resolutions on June 13, 1963. It is under the program of the State University of New York. The cost of building and equipment is shared equally by the State and the two counties. The cost of operating the college is shared three ways—by the State, by the two counties, and by the tuitions of the students.

Fulton-Montgomery Community College is one of many locally sponsored colleges in New York State. It is established to meet the needs of the rapidly expanding high school population in this area. It is the answer to the need of low-cost, close-to-home, higher education facilities.

The College belongs to the citizens whom it serves and upon whom it depends for support. In order to begin operation in September 1964, the College Board of Trustees gratefully accepted the use of the former Johnstown High School building until a permanent site could be obtained and building completed.

Since it is impossible to meet all varieties of local needs in a temporary building, it was decided to offer College Parallel Programs and Business, Electrical and Laboratory Technologies. The College Parallel Program enables area students to transfer for their third and fourth years of college to four-year institutions offering courses in Engineering, Business Administration, Teaching, and general Liberal Arts. Extension and summer session programs of study are offered at the college.

The College enrolled approximately 300 students in September 1964 for its first year of operation. A total of 721 students registered in September 1965 and 820 in 1966. Facilities to accommodate 1,000 students will be built on a 194-acre site acquired in 1965. This location is on N.Y. Route 67, approximately midway between Amsterdam and Johnstown. Tourists will be able to drive

STATE UNIVERSITY OF NEW YORK

Board of Trustees

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 University Dean for
 Two-year colleges. S. V. Martorana, B.S., M.A., Ph.D.

FULTON-MONTGOMERY COMMUNITY COLLEGE

Board of Trustees

Term Ends

Allen H. Pulsifer, <i>Chairman</i>	1967
John Deisseroth, <i>Vice Chairman</i>	1968
William A. Wright, <i>Treasurer</i>	1972
Joel W. Ager.....	1973
Reverend Edward Glavin.....	1966
Ward J. Hinkle.....	1969
Carl S. Salmon, Jr.....	1971

FULTON-MONTGOMERY COMMUNITY COLLEGE

Administration

- William L. Gragg..... President
Indiana University, B.S.
Cornell University, M.S., Ph.D.
- Peter C. Brase, Jr..... Professor, Dean
Tufts University, B.S.
Columbia University, M.A., Ed.D.
- Marc S. Salisch..... Associate Professor, Dean of Students
Rutgers University, A.B.
Columbia University, M.A.,
Professional Diploma
- George T. Engelman, Jr..... Associate Professor
Indiana University, A.B., M.S.
Director of Admissions
- Ralph G. Hoag..... Associate Professor, Director of Extension
State University of New York at Albany, B.S.
Columbia University, M.A.
- Ralph D. Chapman..... Assistant Professor, Business Manager
Syracuse University, B.S.
- Andrew V. DeMarco..... Instructor, Director of Financial Aid
Rochester Institute of Technology, B.S.
Syracuse University, M.B.A.

Faculty

- Allan R. Andrews..... Instructor, Biology
El Camino College, A.A.
California State College, B.A.
University of California, Los Angeles, M.A.
- Edwin Bernstein..... Instructor, Business
Los Angeles City College, A.A.
University of Southern California, B.S., M.S.
New York University, M.B.A., C.P.A. (Calif.)
- Rita M. Burke..... Assistant Professor, Foreign Languages
McGill University, B.A.
Columbia University, M.A.
- Robert I. Cole..... Assistant Professor, Social Science
Hartwick College, B.A.
State University of New York at Albany, M.A.
- David T. Cooney..... Instructor, Foreign Languages
Our Lady of Hope, A.A.

Donald H. Dockstader Instructor (part-time), Graphics
 State University College at Oswego, B.S.
 Cornell University, M.S.

Jackson Douglass Laboratory Teaching Assistant
 State University Agricultural and Technical College
 at Morrisville, A.A.S.

Patricia Draper Instructor, Assistant Librarian
 Barnard College, B.A.
 State University of New York at Albany, M.I.S.

Gerald J. Fabiano Professor, Social Science
 State University College at Fredonia, B.S.
 Syracuse University, M.A.
 New York University, Ph.D.

Eleanor F. Ferris Instructor, Art History
 Bryn Mawr College, A.B.
 State University College at Oneonta, M.S.

Ernest A. Fierro Assistant Professor, Physical Education
 State University College at Cortland, B.S., M.S.

Jack M. Frederick Associate Professor, Social Sciences
 St. Lawrence University, B.A.
 Columbia University, M.A.

Dorothy Gennett Instructor, Business
 State University of New York at Albany, B.S., M.S.

Bernard J. Gudatits Instructor, Physics
 Fairleigh Dickinson University, B.S.

Belmont C. Hurley Assistant Professor, Biology
 Thiel College, B.A.
 University of Pittsburgh, M.Ed.

Gerald A. Iannotti Assistant Professor, English
 LeMoynes College, B.A.
 Niagara University, M.A.

Bruce Jacobs Instructor, Business
 C. W. Post College, B.S.
 Arthur T. Roth Graduate School of Business, M.B.A.

William J. Joyce Instructor, English
 Fordham College, B.S.
 New York University, M.A.

Paul A. Koehler Assistant Professor, Music
 West Chester State Teachers College, B.S.
 Columbia University, M.A., Professional Diploma

Robert D. Leinwand Instructor, Electrical Technology
 Bradley University, B.S.

Charles G. Lindberg Instructor, Mathematics
 Cornell University, B.S.
 North Carolina State College of Agriculture and Eng., M.S.

Helen P. Mandato Instructor, Business
 State University of New York at Albany, B.S.

Dean J. McCreight Instructor, Mathematics
 Lock Haven State College, B.S.Ed.
 The Pennsylvania State University, M.Ed.

Raymonde Maxson Instructor, Foreign Languages
 Ste. Marcienne Lycee, Algiers
 Russell Sage College, B.A.

Robert E. Meacham Instructor, Mathematics
 Massachusetts State Teachers College at North Adams, B.S.
 University of Notre Dame, M.S.

William Miskinis Instructor, Business
 State University of New York at Albany, B.S., M.S.

Arléne C. Moss Instructor, English
 University of Connecticut, B.A., M.A.

Ethel H. Nichols Assistant Librarian
 State University of New York at Albany, B.A.

Arnold E. Perlmuter Instructor, Social Science
 Boston University, A.B., A.M.

Frederick Renvyle Assistant Professor, Mathematics
 Harvard College, A.B.
 Bowdoin College, A.M.

Eleanor D. Reppenhausen Assistant Professor, Librarian
 Russell Sage College, B.A.
 State University of New York at Albany, M.S.I.S.

Donald W. Rogers Assistant Professor, Biology
 Mansfield State Teachers College, B.S.
 Alfred University, M.S.

Eloisa C. Sacerio Instructor, Foreign Languages
 Havana University, Dr. Ciencias Politicas Sociales
 y Economicas; Dr. in Farmacia; Licenciado, Derecho
 Diplomático y Consular
 Indiana State University, B.A., M.S.

E. Frederick Shortland Associate Professor, Chemistry
 Royal Technical College,
 Sir George Williams University, B.Sc.
 McGill University, Ph.D.

William S. Smithers Instructor, Sociology
 St. Lawrence University, B.A., B.D.

Hazel Holdorf Swart Instructor, English
 University of Minnesota, B.S.
 State University College at Oneonta, M.S.

Paul A. Tague..... Instructor, Physical Science
 Michigan State University, B.S.
 Temple University, M.S.
 Allen W. Terek..... Instructor, Social Science
 Wesleyan University, B.A.
 John D. Vadney..... Assistant Professor, Mathematics
 Utica College of Syracuse University, B.A.
 Syracuse University, M.A.
 Joseph D. Villoni..... Instructor, English
 State University College at Plattsburg, B.S.
 State University of New York at Albany, M.S.
 Albert C. Vunk..... Assistant Professor, Electrical Technology
 Clarkson College, B.E.E.
 Professional Engineer, State of New York
 A. Bruce Wadsworth..... Instructor, Business
 State University of New York at Albany, B.S., M.S.

Aims and Purposes

Fulton-Montgomery Community College was established by the citizens of Fulton and Montgomery counties to provide educational opportunities to the young people and adults of the area. The College is under the program of the State University and subscribes to its motto: "Let each become all he is capable of being." To this end the College proposes to offer educational programs as diversified as its means will allow to meet the needs of a varied student population. Programs in the Liberal Arts and Engineering Science are offered for those students who desire to transfer to four-year institutions to work for a bachelor's degree, and programs in Business and the Technologies, for those who plan to seek employment after completion of the requirements for the Associate Degree.

The College owes a further obligation to its students and to the community it serves. Our students will soon be entering the life of the community. They should develop a vocational goal which is compatible with their abilities and interests. They should learn about their society and the world in which they live, so they can function in their community as well-informed and contributing citizens. They should be given a firm educational foundation which will permit them to continue to develop intellectually, both in fields related to their vocations and in broad cultural areas.

Service to the community further entails offering programs for in-service growth in occupations and for avocational interests and cultural activities. Similarly, the College offers counseling in educational matters to all members of the community beyond secondary school.

Accreditation

The programs offered by Fulton-Montgomery Community College are registered with the New York State Department of Education.

The College is authorized by the Board of Regents of the University of the State of New York to confer upon its graduates the degrees of Associate in Arts and Associate in Applied Science.

All programs are approved for the training of veterans under the various public laws and the college is approved for holders of New York State scholarships.

Admissions

Applications are accepted for students desiring to enter the college in either September or February. All who wish to matriculate must file a formal application, involving the use of the State University Admissions Program forms.

Forms may be secured by writing to the Director of Admissions at the College. Students who would like an interview should make an appointment with the Director of Admissions to discuss their plans and programs.

Acceptances are normally made to applicants upon completion of all forms.

Applicants are selected for full matriculation on the basis of:

1. High school grades (particularly junior and senior grades) and rank in class;
2. High school subjects appropriate to the selected college program;
3. High school and community activities;
4. Interest and motivation as judged by high school principal, guidance counselor, teachers, and personal interview at the College;
5. Either the Regents Scholarship Examination or State University Selective Admissions Examination.

Advanced Placement for High School Students

Fulton-Montgomery Community College will permit some high school students to take courses at the college. Credit for these may be later credited to their records here or transferred to other institutions. Such students will be accepted under the following conditions:

1. They must be recommended by the high school. This recommendation should be based on the principal's or counselor's estimate of the prospective student's maturity, ability to do satisfactory work at the college level, and preparation for the course.
2. The course that they propose to take is not available at the high school.
3. The course that they propose to take is important in the attainment of the student's educational objectives.
4. Permission to take the course is granted by the instructor and by the Dean.

Credit will not be granted nor will official transcripts be issued until the student submits evidence of high school graduation.

The college reserves the right to limit the number of students admitted under this program and the students admitted will be subject to the rules and regulations of the college while in attendance.

Financial Information

FEES

Application Fee (This must be included with initial application. Non-refundable)	5.00
Registration Fee	10.00*
New students	10.00*
Returning students	5.00
Laboratory Fees (each semester)	5 - 10.00
College Service Fee (each semester)	20.00
Student Insurance Fee (per year)	6.50
Graduation Fee (last semester only)	6.00
Late Registration Fee	10.00

*Payable prior to assigned College testing date.

TUITION

New York State Residents*	
Full-time (each semester)	150.00
Part-time (each semester) — Per credit hour	12.50
Non-Residents	
Full-time (each semester)	300.00
Part-time (each semester) — Per credit hour	25.00

*Residents of New York State must file a "Certificate of Residence."

CERTIFICATE OF RESIDENCE

To qualify for the New York State resident tuition fee, a student is required by law to present to the College Business Office a Certificate of Residence before registration, indicating that he has been a resident of New York State for a period of at least one year prior to the date of the Certificate and a resident of a County in New York State for at least six months prior to the date.

Certificate of Residence forms may be obtained from the Admissions Office. New York State residents who are not residents of Fulton or Montgomery counties must have the form SUNY-B-81 completed by the County Treasurer of the County in which they reside.

REFUNDS

If the student withdraws from the college on or before the end of late registration, 80% of tuition paid may be refunded. To obtain the refund, a student must submit his resignation in writing and have it accepted by the Dean.

STUDENT PERSONNEL PROGRAM

The Student Personnel Program of Fulton-Montgomery is an integrated educational program concerned with the helping of each individual develop to his fullest potential by offering an instructional program outside the classroom, supplementing and reinforcing the classroom instructional program, and assisting the student to gain maximum benefit from his collegiate experience. The Student Personnel Program encompasses all aspects of a potential present, or past student relationship with the institution outside of the formal academic program.

Activities

The college offers a variety of co-curricula and extra-curricula activities in which all students are encouraged to participate.

Student Government

All students paying their activities fee are members of the Student Government Association and eligible to participate in the various activities and serve on S.G.A. committees or as an S.G.A. senator, if elected. The S.G.A. directs and develops the student activities program of the college through its responsibility for chartering student organizations and allocating the student activities fee.

Publications

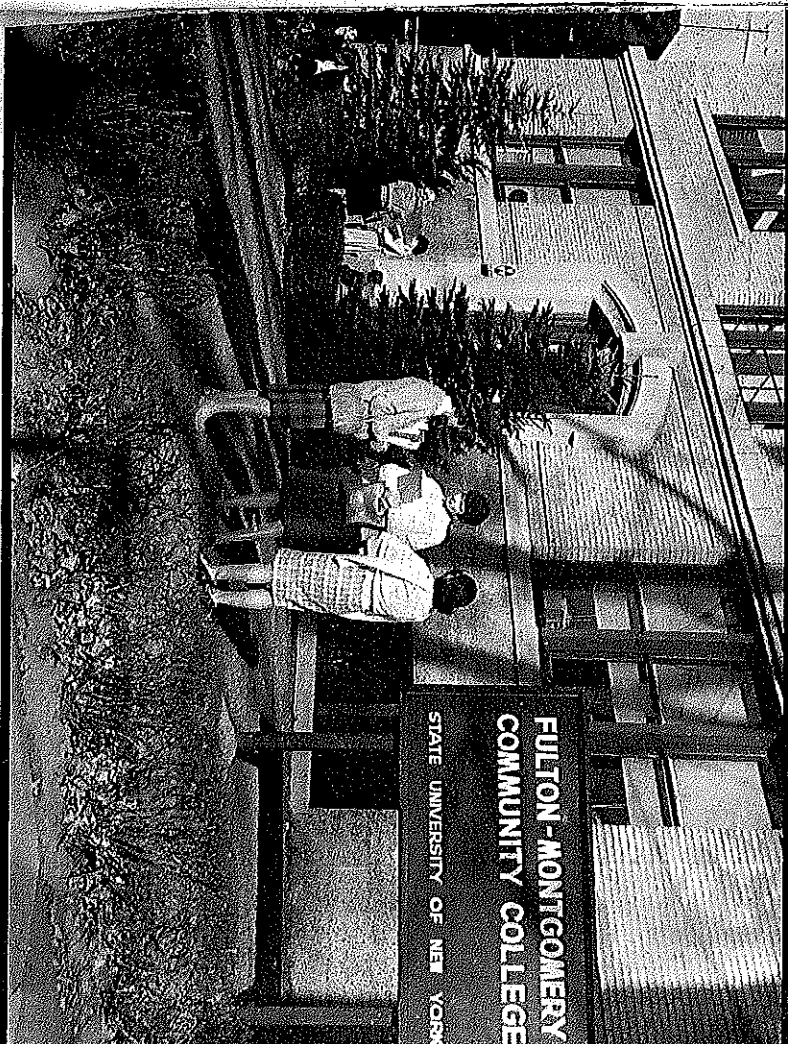
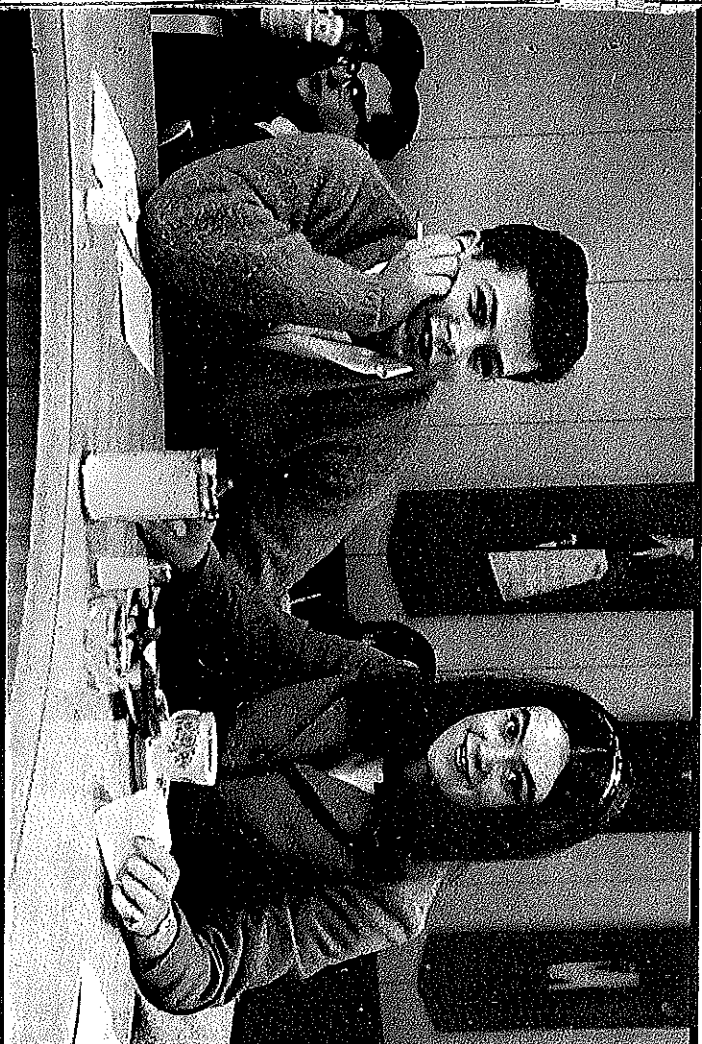
The Gateway (newspaper) offers periodic coverage of college events and is distributed to all students and faculty. *The Lamp-lighter* (yearbook) is published each Spring and provides a review of the year's activities.

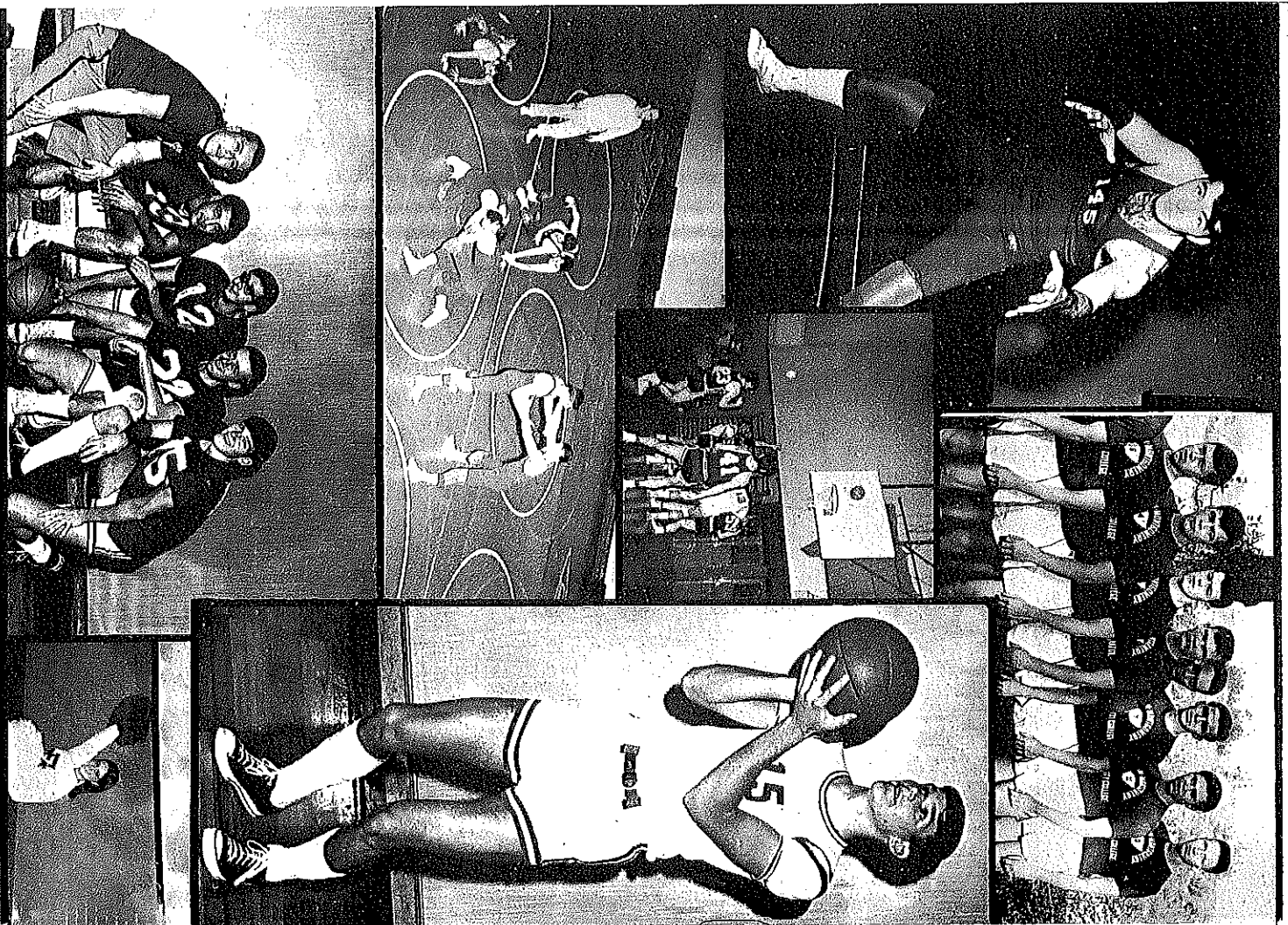
Cultural

The college offers a diversified program of speakers, musical and dramatic presentations, art exhibitions, and films to its students, faculty, and members of the local communities. The presentations of the College-sponsored Drama Guild, Chorus, and Band are supplemented by the various outside attractions brought to the College in order to ensure a balanced cultural program.

Clubs and Organizations

The students have organized a number of special interest groups to meet their particular needs. Among the groups presently functioning are Phi Beta Lambda (Professional Business Fraternity), Alpha Omega (Women's Service Society), Radio, Newman, Mathematics, and the Literary Club.





Athletics

The Athletic Program is sponsored by the Physical Education and Athletic Department. A wide variety of intramural sports are provided to meet the needs and interests of men and women students. All students are urged to take part in the intramural program. Leagues are conducted in badminton, basketball, bowling, ping pong, soccer, softball, and volleyball. *The Raiders* are members of the National Junior College Athletic Association, and are active in the Northeastern College Conference and the State University Junior College Athletic Conference. Teams are fielded in basketball, bowling, cheering, cross-country, golf, skiing, softball, and wrestling.

Bookstore

The College maintains a bookstore in the Perry Building as a service to its students to enable them to purchase textbooks and other school related supplies inexpensively and conveniently. Students are encouraged to indicate to either the bookstore manager or the Dean of Students any ways in which the bookstore can better serve their needs.

Counseling

Students wishing to discuss problems of a vocational, educational or personal nature, or other concerns are encouraged to meet with their faculty adviser, the Dean of Students, or other members of the Student Personnel Staff. All members of the Student Personnel Staff render individualized counseling beyond that provided by the student's faculty adviser. Appointments for individual counseling are treated confidentially and are continued only on the initiative of the student requesting them.

Faculty Advisers

Each full-time student is assigned a faculty adviser previous to his first registration at the College. This faculty member is usually selected on the basis of the student's academic interest area and is prepared to assist the student in formulating his educational and vocational plans. The student is expected to meet with his faculty adviser before each registration period so that his academic program may be reviewed in order to determine that the student is pursuing an appropriate program and making satisfactory progress.

FINANCIAL AID

POLICY—The College believes that the lack of financial resources should not handicap or limit the educational opportunities of any individual. In keeping with this belief, the College will, insofar as

possible, provide such financial aid programs which will enable any qualified student in need of financial assistance to benefit from a college education. The College further believes that a recipient of financial aid should receive sufficient assistance to assure his full participation in all aspects of college life. This commitment to the student shall be honored as long as the student remains enrolled as a full-time student at Fulton-Montgomery Community College. The College is a subscriber to the College Scholarship Service and adheres to its principles.

COST—In addition to the tuition fees listed in another section of the catalog, all students should anticipate other expenses. Commuting students should plan on meeting the cost of books and supplies, transportation, luncheons, and personal expenses, such as social and clothing. In addition to the costs listed for the commuting student, a residential student should budget for the cost of his room and board. The exact amount of these costs vary from individual to individual.

SCHOLARSHIPS—New York State Regents Scholarships — The State of New York awards scholarships to outstanding students on the basis of the Regents Scholarships Exam administered while you are still in high school. The amount and term of the award generally depends on program of study, need and financial ability. Information should be obtained from your high-school guidance office.

Other Scholarships—From time to time information is received by the Financial Aid office of scholarships available to eligible students. Information on these scholarships sponsored by community agencies, veteran organizations and various services groups and fraternal organizations is available from the Financial Aid Director.

GRANTS—New York State Scholar Incentive Program—Any person enrolled in a college in New York State in a full-time program leading to a degree may be entitled to a *Scholar Incentive Award* for each semester of attendance if he has been a resident of New York State for the preceding year and meets the prescribed academic requirements. Entering freshmen can qualify through one of the following ways:

1. By winning a Regents Scholarship
2. By scoring at least 100 on Regents Scholarship Examination
3. By earning a Regents diploma from high school
4. By obtaining a combined S.A.T. score of at least 800
5. By scoring at least 100 on the State University Admissions Examination

Qualified students planning to attend, or attending Fulton-Mont-

gomery are entitled to receive the minimum award of fifty (\$50) dollars per semester, or one hundred (\$100) dollars for the college year. It is not necessary to supply income data to receive the minimum award.

Education Opportunity Grant Program—Eligible students who are accepted for enrollment on a full-time basis or who are currently enrolled in good standing, may receive Educational Opportunity Grants for each year of their higher education, although the maximum duration of a grant is 4 years. These grants are limited to exceptionally needy students who but for this aid could not go to college. To be eligible the student must also show academic or creative promise.

LOANS—New York Higher Education Assistance Corporation — A State program of guaranteed loans made by lending institutions to qualified students of N.Y.S. Under the plan, the student borrows from the lending institution on promissory notes as needed for each school year.

\$ 750 Freshman year	\$1250 Junior year
1000 Sophomore year	1500 Senior year

The student pays no interest while in school (this is assumed on student's behalf by NYHEAC). While student may repay the loan at any time, arrangements for monthly repayment of capital must be made within 60 days after graduation or the termination of study. Payments, depending on the amount owed, may be spread over a period as long as six years. You may obtain information and/or forms from the Lending Institution of your choice or from:

New York Higher Education Assistance Corporation
111 Washington Avenue, Albany, New York 12224

NATIONAL DEFENSE STUDENT LOAN—This is a college-administered loan program which provides educational loans for academically and financially qualified students. An undergraduate student may borrow up to \$1,000 each academic year. The repayment period and the interest do not begin until 9 months after the student ends his studies.

PART-TIME EMPLOYMENT—The college has available a number of part-time positions for students working as clerical aides, lab technicians, teacher aides and audio-visual assistants. In addition to the placement of students in college sponsored part-time jobs, the college participates in a federally financed program of employment for students who need a job to help pay for college expenses. This program provides for on-campus and off-campus employment. Students may work up to 15 hours weekly while attending classes full-time. During summer or other vacation periods when they do not

have classes, students may work full-time (40 hours per week) under this program.

APPLICATION PROCEDURE — Students requiring financial aid should request a financial aid packet when requesting their admission application. Financial aid applicants are encouraged to complete their admission application as early as possible so that they can arrange an interview with the Director of Financial Aid. All financial aid applicants are required to file a College Scholarship Service Parents Confidential Statement and should indicate Fulton-Montgomery as a recipient of this information even if they are applying to additional institutions.

Food Service

The College maintains a cafeteria in the College annex which is open to all students and staff during the morning and afternoon and offers a sandwich and limited hot meal menu. In addition, a number of food vending machines are available at various locations in the College.

Housing

Fulton-Montgomery Community College does not maintain dormitories. A list of rooms is available at the college office, but the College assumes no responsibility either to the student or to the landlord.

Students planning to secure rooms near the College should contact the Dean of Students' Office for a listing of available rooms. Students obtaining rooms must notify the Dean of Students' office of their current local address.

Identification Cards

All new students at the College are issued a photographic identification card which is renewed each semester and is their means of obtaining entrance to various college events and checking books out of the library. New students are issued temporary I.D. cards at registration and permanent ones are available within the first four weeks of the semester from the Dean of Students' Office. Lost I.D. cards should be reported to the Dean of Students' Office and a new one obtained for a replacement charge of one dollar.

Insurance

Accident and sickness insurance is required of all full-time students and optional for part-time students. The student will receive up to \$500 for medical costs resulting from one accident after the student has paid the first \$10. All accidents must be reported immediately to the business office if a student wishes to be reimbursed for the expenses incurred.

Orientation

The College offers an orientation program which aids each new student in becoming familiar with all aspects of college life. Special emphasis is placed upon study skills, attitudes, college services, rules and regulations and the activities and athletic program. Orientation is required of all new students.

Placement and Career Planning

The College maintains a placement service to assist its graduates in obtaining full-time employment after graduation. Students seeking positions after graduation should see the Placement Director no later than early in the spring semester. This office will also assist students in explaining various vocational opportunities and career choices at any time during their college career. Students interested in career related summer and part-time employment should also contact this office.

Transfer

Students who plan to transfer to other institutions are encouraged to consult with the Transfer Co-ordinator and their faculty adviser early in their college career. A file of college catalogs is maintained in the library and the Student Personnel Office to enable students to familiarize themselves with the programs and requirements of other institutions. In the fall of their second year students should arrange an appointment to discuss their transfer plans with the Transfer Co-ordinator, request catalogs and application forms from the college of their choice and attend the on-campus meetings with the college representatives. All requests for recommendations to other institutions are to be directed to the Transfer Co-ordinator. Students who have maintained a satisfactory academic record at the College in an appropriate curriculum, have encountered little difficulty in transferring to a four-year institution.

The Library

The Library is housed on the second floor of the Main Building. The collection is constantly growing and at present consists of approximately 10,000 volumes. Over 200 current periodicals are received for student and faculty use. Back issues of major periodicals are on microfilm and 3 microfilm readers make these available to students. A coin operated photocopying machine is also located in the library. Records from our growing collection may be borrowed or may be played on the library playback. Seating for 65 students is provided.

Extension and Summer Session

The Extension Program provides an opportunity for adults who desire to continue their education but are unable for a variety of reasons to attend college full-time. While many students intend to seek associate degrees, others elect to take specific courses to meet job requirements, to facilitate professional advancement, or to develop and improve an individual's cultural and intellectual advancement. Courses are offered at the campus in Johnstown and also in Amsterdam.

The College also conducts a summer session at its campus. Courses may be used for credit either at the college or transferred to other institutions.

Students who plan to work for a degree in Extension should plan to matriculate. Matriculation is the procedure by which the College:

- Evaluates a student's qualifications to pursue a program of study leading to a degree;
- Accepts or rejects the student's application for admission to the College as a degree-candidate;
- Sets up in conference with the student, if he is accepted as a degree-candidate, a specific plan of study, including all required and elective courses;
- Accepts the obligation to provide the student with advisement and to grant him a particular degree when he has successfully completed his approved program of study; and
- The College reserves the right to dismiss, or deny, a degree to any student who fails to comply with its regulation and policies.

Students applying for matriculation should request application forms from the Director of Admissions. These should be filed promptly according to "How to File" instructions.

Procedures outlined in the current college catalog must be followed by all students seeking a degree.

You will be notified by mail as to the actions of the Admissions Office with regard to your application.

Students, after being dismissed from the Day Division for academic reasons, cannot be admitted to the Extension Division for at least one semester. These students, when admitted to the Extension Division, must apply for re-admission in order to become reinstated as a matriculated student.

For further information write or call the Director of Extension.

Academic Regulations

The progress of students at the College is indicated by the grades received in each course. The following grade system is used:

Grade	Grade Points
A	4
B	3
C	2
D	1
F	0
I*	0
W	0
WF**	0

The grade-point average is computed by multiplying the grade points earned in a course by the number of credit hours for the course, adding these products for each course and dividing by the total number of credit hours.

A student's standing in the College is determined by his cumulative grade-point average. Students whose grade-point average is unsatisfactory will be placed on probation. The minimum satisfactory averages at the end of each semester are:

First Semester	1.50
Second Semester	1.75
Third Semester	1.90
Fourth Semester	2.00

A student who has been placed on probation for two consecutive semesters will not be eligible to continue at the College. Students who do not attain a grade-point average of 1.00 or higher in any one semester are also ineligible to continue at the College.

A minimum cumulative grade-point average of 2.00 is required for graduation.

Attendance at all classes for which a student is registered is expected. Excessive absences may lead to a student being denied the right to take the final examination and consequently to a grade of F in the course.

Cheating constitutes reasonable grounds for dismissal from the course with a grade of WF assigned thereto.

* A grade of I indicates that, at the end of the course, some of the requirements were not completed by the student due to circumstances beyond his control. These requirements must be completed in the following semester or the grade of I automatically becomes F.

**The grade points acquired with a WF will be computed in the grade-point average even if the course is later repeated with a satisfactory grade.

Withdrawal from the College

The College believes that attendance at this institution is voluntary and subject to termination by either the institution or the student concerned when the college can no longer meet the needs of that individual. A voluntary withdrawal by a student is not necessarily an indication of failure on the part of the institution or the student, but rather a decision by the student that the college no longer serves his present needs.

The College is concerned that a student who decides to withdraw has a clear understanding of the reasons for this decision and is helped to formulate future plans that will be most beneficial to him. The institution is also concerned that there be an orderly withdrawal procedure so as to assure the student that when he voluntarily severs his relationship with the institution there be no procedural problems impeding his entering another institution or reentering this institution. This procedure is formulated on these principles and is not designed to impede withdrawal of a student.

Dean's List

In recognition of superior achievement a student who attains in any one semester a grade-point average of 3.20 or better will be placed on the Dean's List.

Credit on Proficiency Exams

Fulton-Montgomery Community College cooperates with the New York College Proficiency Examination Program and will grant credit towards a degree to students who receive satisfactory grades on the examination. Credit will be granted under the following rules:

1. Each case will be evaluated individually by the academic dean. His decision will be final.
2. Credit will be given for satisfactory performance on a CPE if the examination is based upon the content of a course offered by the college or one which would be acceptable on a transfer basis from another college.
3. Credit will be granted only to a student who has met the entrance requirements of the college and has been admitted officially.
4. Credits shall not exceed 15 semester hours.
5. Examinations must have been taken within 5 years of application for credit.
6. A student failing a course at Fulton-Montgomery Community College may not obtain credit for said course by CPE.

REQUIREMENTS FOR DEGREES

By the authority of the Board of Regents of the University of the State of New York the College confers the degrees of Associate in Arts (A.A.), Associate in Science (A.S.), and Associate in Applied Science (A.A.S.) upon its graduates. To be eligible, candidates for these degrees must be matriculated and must meet the following minimum requirements established by the Board of Regents:

ASSOCIATE IN ARTS (A. A.)

- I. Degree requirements: A total of 60 semester hours.
- II. Curriculum requirements: The course of study leading to this degree should be an organized curriculum composed essentially of courses in the liberal arts and sciences. At least 80 per cent of the program in terms of credit hours should comprise work in the following fields:
 - A. Social Sciences: A minimum of 12 semester hours.
 - B. Biological Sciences and Physical Sciences (including mathematics): a minimum of 9 semester hours. At least 3 semester hours of mathematics should be included in this total.
 - C. Humanities: a minimum of 18 semester hours to include the following:
 1. 12 semester hours in English (composition, speech, and literature);
 2. 6 semester hours in other subjects in the Humanities.
 - D. Electives in the foregoing fields to ensure a total of 80 per cent of the program in terms of credit hours in the liberal arts and sciences.

ASSOCIATE IN SCIENCE (A. S.)

- I. Degree requirements: A total of 60 semester hours.
- II. Curriculum requirements: The course of study leading to the degree should be an organized curriculum, composed essentially of courses in the liberal arts and science. At least 80 per cent of the program in terms of credit hours should comprise work in the following fields:
 - A. Social Sciences: A minimum of 6 semester hours.
 - B. Biological Sciences and Physical Sciences (including Mathematics): a minimum of 6 semester hours in a laboratory science and 6 semester hours in mathematics.

- C. Humanities: a minimum of 6 semester hours in composition and speech.
- D. Electives in the foregoing fields to ensure a total of 80 percent of the program in terms of credit hours in the liberal arts and sciences.

ASSOCIATE IN APPLIED SCIENCE (A. A. S.)

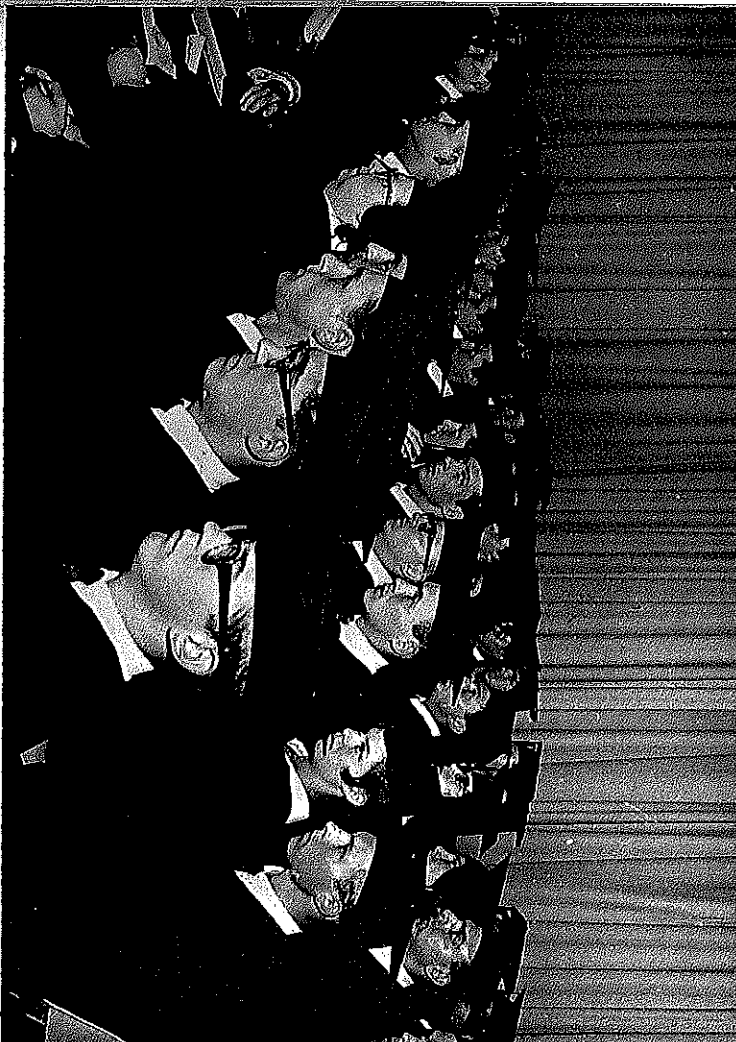
I. Degree requirements: A total of 60 semester hours.

II. Curriculum requirements:

- A. A minimum of 20 semester hours drawn from the liberal arts and sciences or general education areas as follows:
 - 1. Social Sciences: a minimum of 6 semester hours;
 - 2. Biological Sciences and Physical Sciences (including mathematics): a minimum of 6 semester hours. At least 3 semester hours of mathematics should be included in this total;
 - 3. Humanities: a minimum of 6 semester hours in English (composition and/or speech);
 - 4. Electives in the foregoing fields to ensure a total of 20 semester hours in the liberal arts and sciences or general education areas.
- B. A minimum of 20 to 30 semester hours in the major concentration and related courses.

The College has established requirements in its program which exceed those established by the Board of Regents and which must be met before the appropriate degree will be conferred. These requirements are listed in the programs for degrees in the following pages.

The credits submitted by a student for a degree must be of satisfactory quality, that is, a minimum grade-point average of 2.00 must be attained for the program and courses taken at the college.





LIBERAL ARTS (A. A.)

Humanities and Social Science

This program is designed primarily for those students who plan to transfer to other colleges in programs leading to the bachelor's degree. This program should be followed by students interested in advanced study in the humanities, and social sciences or in teacher education programs leading to certification by New York State.

FIRST YEAR

First Semester

EN 131	English Composition	2
SS 183	Western Civilization	3
	Foreign Language	3
	Mathematics or Science	3-4
	Elective	3-4
		<hr/> 15-17

Second Semester

EN 132	Speech	3
SS 184	Western Civilization	3
	Foreign Language	3
	Mathematics or Science	3-4
	Elective	3-4
		<hr/> 15-17

SECOND YEAR

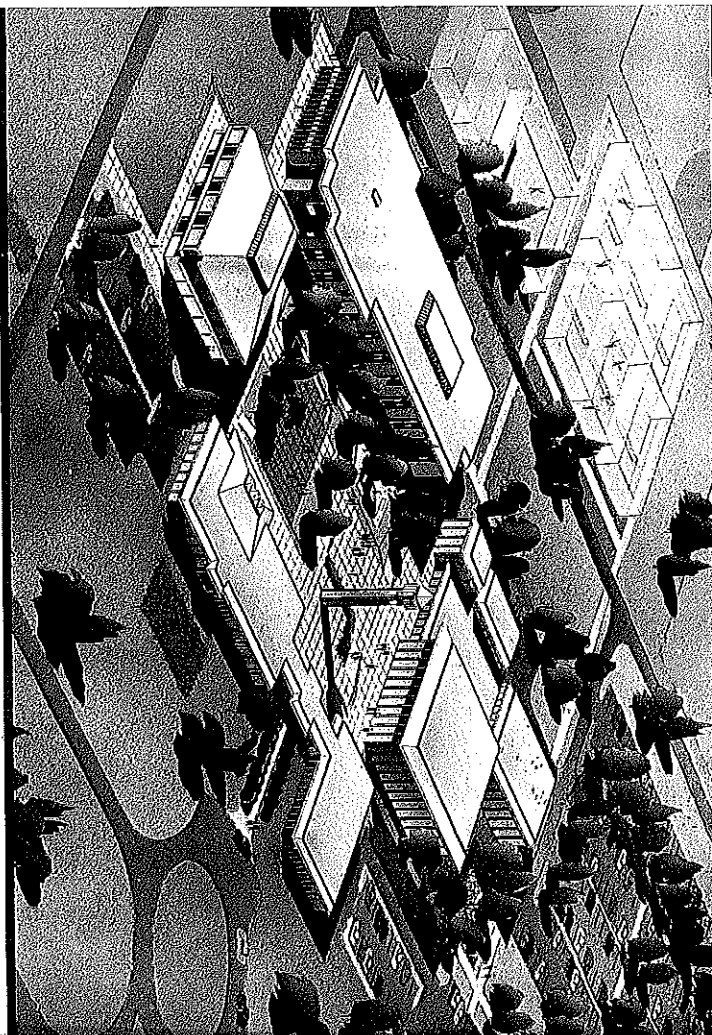
First Semester

EN 231	Literature	3
	Social Science Elective	3
	Foreign Language or Elective	3
	Mathematics or Science	3-4
	Elective	3-4
		<hr/> 15-17

Second Semester

EN 232	Literature	3
	Social Science Elective	3
	Foreign Language or Elective	3
	Mathematics or Science	3-4
	Elective	3-4
		<hr/> 15-17

All students must complete 2 years of English (EN 131, 132,



231, and 232), 2 years of social science (SS 183, 184, and 6 semester hours in other social science courses), and one year of each of the following: foreign language, mathematics (MA 150 is not acceptable as part of the requirement), and science. At least 80 per cent of the credits offered for the Associate in Arts degree must be in the area of the liberal arts and sciences.

LIBERAL ARTS (A. S.) MATHEMATICS AND SCIENCE

This program is designed for students who plan to transfer and continue their studies in programs leading to the bachelor's degree with particular emphasis on advanced study in the sciences and mathematics. Preparation for the professional fields of medicine and dentistry as well as teaching science and mathematics on the elementary and secondary level can be initiated with this program.

FIRST YEAR

First Semester

EN 131 English Composition	3
SS 183 Western Civilization*	3
Foreign Language	3
Mathematics	3-4
Science	3-4
	15-17

Second Semester

EN 132 Speech	3
SS 184 Western Civilization*	3
Foreign Language	3
Mathematics	3-4
Science	3-4
	15-17

SECOND YEAR

First Semester

Mathematics	3-4
Science	3-4
Foreign Language or Elective	3
Elective	3
Elective	3
	15-17

Second Semester

Mathematics	3-4
Science	3-4
Foreign Language or Elective	3
Elective	3
Elective	3
	15-17

All students must submit for graduation a total of 60 semester hours including 12 semester hours in the humanities (EN 131 and EN 132, and one year of a foreign language), 6 semester hours of social science (SS 183 and SS 184), 6 semester hours in mathematics (MA 150 cannot be used to meet the mathematics requirement, nor can it be included in the 60 semester hours required for graduation), and one year of a laboratory science. Electives should be selected to make up a unified program of at least 60 semester hours. A minimum of 80 per cent of the credits submitted for graduation must be drawn from the liberal arts and sciences. *SS 183 and SS 184 may be postponed until the second year.

ENGINEERING SCIENCE (A. S.)

Students with good academic backgrounds in science and mathematics who are interested in careers in engineering will secure through this program the basic science and mathematics preparation needed for success in the junior year at four-year engineering schools. Transfer to bachelor's degree programs in chemical, civil, electrical, mechanical, and other engineering fields can be arranged for properly qualified students.

Prerequisites: Satisfactory completion at the high school level of one year of chemistry, one year of physics, and 3½ years of mathematics. Students who lack ½ year of mathematics may be admitted with the consent of the department.

FIRST YEAR

First Semester

EN 131 English Composition	3
MA 157 Analytic Geometry and Calculus	4
CH 175 College Chemistry	4
MD 171 Engineering Graphics	3
PH 131 Engineering Physics	4
	18

Second Semester

EN 132	Speech	3
MA 158	Analytic Geometry and Calculus	4
CH 176	College Chemistry	4
MD 172	Engineering Graphics	3
PH 132	Engineering Physics	4
	<hr/>	18

SECOND YEAR

First Semester

MA 257	Social Science Elective	3
PH 235	Analytic Geometry and Calculus	4
PH 231	Engineering Mechanics	3
	Engineering Physics	4
	Elective	3-4
	<hr/>	17-18

Second Semester

MA 258	Social Science Elective	3
PH 236	Topics in Calculus	4
PH 232	Engineering Mechanics	3
	Engineering Physics	4
	Elective	3-4
	<hr/>	17-18

ELECTRICAL TECHNOLOGY (A. A. S.) ✓ *68 Nov*

This program is designed for those students who plan to seek employment after two years at Fulton-Montgomery Community College as laboratory technicians, electrical draftsmen, engineering assistants, and service technicians. An interest in electricity and electronics and a degree of manual dexterity are assets.

Prerequisite: High school algebra. Trigonometry and physics are desirable.

FIRST YEAR

First Semester

EN 131	English Composition	3
MA 155	Technical Mathematics	3
PH 175	Technical Physics	4
EL 121	Electricity	4
MD 175	Electrical Graphics	3
	<hr/>	17

Second Semester

EN 132	Speech	3
MA 156	Technical Mathematics	3
PH 176	Technical Physics	4
EL 122	Electricity	4
MD 176	Electrical Graphics	3
	<hr/>	17

SECOND YEAR

First Semester

MA 255	Social Science Elective	3
EL 223	Technical Mathematics	4
EL 221	Electric Machines	3
EL 225	Electronics	4
EL 227	Analogue Computers	2
	Instrumentation	1
	<hr/>	17

Second Semester

MA 256	Social Science Elective	3
EL 224	Technical Mathematics	4
EL 222	Electric Machines	3
EL 226	Electronics	4
EL 228	Digital Computers	2
	Instrumentation	1
	<hr/>	17

ACCOUNTING (A. A. S.) ✓

The accounting program provides the basic principles and procedures which are readily applicable to the problems students will meet in the business world as accountants and cost analyst trainees in numerous areas such as industry, finance, insurance, banking and government on the junior management level.

FIRST YEAR

First Semester

EN 131	English Composition	3
SS 183	Western Civilization	3
BU 111	Business Mathematics	3
BU 121	Principles of Accounting	3
BU 141	Elements of Business	3
	<hr/>	15

Second Semester

EN 132	English Speech	3
SS 184	Western Civilization	3
MA 150/151/153	Mathematics	3
BU 122	Principles of Accounting	3
BU 144	Office Machines	3
	<hr/>	15

SECOND YEAR

First Semester

SS 181	Economics	3
BU 221	Intermediate Accounting	3
BU 245	Business Law	3
BU 225	Income Tax Accounting	3
	Science	3-4
	<hr/>	15-16

Second Semester

SS 182	Economics	3
BU 222	Intermediate Accounting	3
BU 224	Cost Accounting	3
BU 246	Business Law	3
	Elective or Science	3-4
	<hr/>	15-16

This program must include a minimum of 30 semester hours of Business subjects of which 15 semester hours must be in accounting and 20 semester hours of liberal arts and sciences, including EN 131 and EN 132, SS 183 and SS 184, one semester of mathematics, and one semester of science.

ELECTIVES

Career Program	Transfer Program
Typewriting I	SC—Science
Business Organization and Management	OR
Retail Management	Elective
Advertising	

BUSINESS ADMINISTRATION (A. A. S.)

The Business Administration program is designed to provide a broad background for future middle management positions in the fields of insurance, banking, civil service, finance, sales, and management trainees in numerous types of business.

FIRST YEAR

First Semester

EN 131	English Composition	3
SS 183	Western Civilization	3
BU 111	Business Mathematics	3
BU 121	Principles of Accounting	3
BU 141	Elements of Business	3
	<hr/>	15

Second Semester

MA 150/151/153	Math	3
SS 184	Western Civilization	3
BU 122	Principles of Accounting	3
BU 144	Office Machines	3
BU 137	Business Communications	3
	<hr/>	15

SECOND YEAR

First Semester

SS 181	Economics	3
BU 145	Business Organization and Management	3
BU 245	Business Law	3
	Science	3-4
	Elective	3
	<hr/>	15-16

Second Semester

BU 241	Marketing	3
BU 246	Business Law	3
BU 248	Principles of Financial Management	3
EN 132	English Speech	3
	Elective	3
	<hr/>	15

This program must include a minimum of 30 semester hours of Business subjects and 20 semester hours of liberal arts and science, including EN 131 and EN 132, SS 183 and SS 184, one semester of mathematics, and one semester of science.

ELECTIVES

Career Program	Transfer Program
Typewriting I	SC—Science
Income Tax Accounting	SS 182
Retail Management	Economics II
Advertising	
Cost Accounting	

SECRETARIAL SCIENCE

The Secretarial Science program provides the necessary education and training for students to obtain positions in business, government, and industry as secretaries, stenographers, general office clerks, receptionists, typist-clerks, machine transcribers, file managers, and payroll-clerks.

FIRST YEAR

First Semester

BU 137	Business Communications	3
SS 183	Western Civilization	3
MA 150/151/153	Mathematics	3
BU 131	Shorthand or Business Elective	3
or		
BU 155	Stenograph (Machine Shorthand)	3
BU 133	Typewriting or Elective	3
		15

Second Semester

SS 184	Western Civilization	3
EN 131	English Composition	3
BU 111	Business Mathematics	3
BU 132	Shorthand or Business Elective	3
or		
BU 156	Stenograph	3
BU 134	Typewriting	3
		15

SECOND YEAR

First Semester

SC 165/143	Science	3-4
BU 144	Office Machines	3
BU 231	Shorthand and Transcription	3
or		
BU 255	Stenograph	3
BU 234	Typewriting	3
BU 235	Office Practice	3
BU 238	Secretarial Seminar	1
		16-17

Second Semester

EN 132	English Speech	3
BU 125	Secretarial Accounting	3
BU 232	Shorthand and Transcription	3
or		
BU 256	Stenograph	3
BU 236	Office Practice	3
	Liberal Arts Elective	3
		15

This program must include a minimum of 30 semester hours of Business subjects and 20 semester hours of liberal arts and sciences, including EN 131 and EN 132, SS 183 and SS 184, one semester of mathematics, and one semester of science.

BUSINESS ACCOUNTING

BU 111 Business Mathematics 3 s.h.

Review of arithmetic operations. Preparation and use of shortcut operations. Instruction and drill in percentage, cash and trade discounts, markup, payroll, sales, property and other taxes. Simple and compound interest, bank discounts, interest, investments, annuities. Stocks, bonds, and other securities. Principles of life insurance and fire insurance, liabilities and coinsurance.

Hours of class per week: 3.

BU 121 Accounting 3 s.h.

First half of a one year course introducing accounting theory. Theory of debit and credit; accounts and special journals; the accounting cycle; accounting for notes and interest, accrued items, receivables, inventories, and plant assets; preparation of financial statements. Emphasis is on sole proprietorship.

Hours of class per week: 3.

BU 122 Accounting 3 s.h.

A continuation of BU 121. Accounting for partnerships and corporations; control systems for departments, manufacturing, job costs and cost control; analysis of statements and data.

Prerequisite: BU 121. Hours of class per week: 3.

BU 125 Office Accounting 3 s.h.

Introductory course for secretarial students designed to familiarize them with the elements of accounting dealing with cash, banking, petty cash transactions, payroll procedures, simple notes and securities, and financial statements.

Hours of class per week: 3.

BU 221 Intermediate Accounting 3 s.h.

Corporate accounting is emphasized. Major classification of items found in financial statements, cash and investments, receivables, inventories, liabilities, plant and equipment are analyzed.

Prerequisite: BU 122. Hours of class per week: 3.

BU 222 Intermediate Accounting 3 s.h.

A continuation of BU 221. Analysis of liabilities; corporate formation and stock transactions; use of data in financial statements. An introduction to business data processing is included in the latter part of the course.

Prerequisite: BU 221. Hours of class per week: 3.

BU 224 Cost Accounting 3 s.h.

Accounting for direct labor, materials, and factory overhead with emphasis on job order costing. Process cost system, standard cost principles and procedures, budgets and direct decision making.

Prerequisite: BU 122. Hours of class per week: 3.

BU 225 Income Tax Accounting 3 s.h.

Federal and State income tax law and regulations are studied. Taxable income, inclusions and exclusions, capital gains and losses, deductions, and other topics are covered. Practice is provided in preparation of income tax returns in both automated and manual format.

Prerequisite: BU 122. Hours of class per week: 3.

BUSINESS ADMINISTRATION

BU 137 Business Communications 3 s.h.

The emphasis is on writing creative and effective business letters by providing practice in writing letters of inquiry, public relations, sales, applications, credit and collections, and business reports.

Hours of class per week: 3.

BU 141 Elements of Business 3 s.h.

An introductory survey of the functions and problems of business management giving the student an overview of the interrelationship among the functional areas of business which he will study in more detail in later courses.

Hours of class per week: 3.

BU 142 Business Organization and Management 3 s.h.

Advantages, limitations, and financing of basic forms of business organization. Management problems of organization, policy formation, communication and efficiency with particular reference to personnel and their supervision, budgets and automation.

Prerequisite: BU 141. Hours of class per week: 3.

BU 144 Office Machines 3 s.h.

Development of proficiency is sought in the use of the ten-key and full keyboard, adding-listing machines, printing calculator and rotary calculator with emphasis on correct technique in operating machines and practical application of these machines by use of special office projects.

Hours of class per week: 3.

BU 241 Marketing 3 s.h.

An analysis of the principles, methods, trends, and problems existing in marketing. A study of the distribution function of middlemen, their movement of goods and marketing policies with some discussion of marketing research.

Prerequisite: BU 141 and BU 142. Hours of class per week: 3.

BU 245 Business Law 3 s.h.

An introduction to the laws applicable to business with major emphasis on contracts, agency and employment, negotiable instruments, and sale of goods. Text and case studies of legal precedents are used extensively.

Prerequisite: BU 141. Hours of class per week: 3.

BU 246 Business Law 3 s.h.

A continuation of the study of the legal aspects of business covering partnerships, corporations and related business organizations, real property and leases, insurance, personal property and bailments.

Prerequisite: BU 245. Hours of class per week: 3.

SECRETARIAL SCIENCE

BU 131 Shorthand 3 s.h.

Basic principles of Gregg Shorthand, Diamond Jubilee Series, including mastery of brief forms. Development of skill in reading and writing shorthand.

Hours of class per week: 5.

BU 132 Shorthand 3 s.h.

Further knowledge essential to the mastery of shorthand. Emphasis on skill in reading and writing shorthand at progressively higher rates of speed for sustained periods of time. Spelling, punctuation, grammar, and the development of business vocabulary are included.

Prerequisite: BU 131. Hours of class per week: 5.

BU 133 Typewriting — Beginning 3 s.h.

Development of basic skills and techniques. Introduction to the use of carbon paper, simple tabulations, business and personal letters, manuscripts and business forms.

Hours of class per week: 5.

BU 134 Typewriting — Intermediate **3 s.h.**
The course emphasizes the development of speed and accuracy and includes extensive work in the production of business letters, reports, business forms, tabulations and manuscripts.
Prerequisite: BU 133. Hours of class per week: 3.

BU 155 Stenograph **3 s.h.**
Development of the mastery of the keyboard and theory of machine shorthand.
Hours of class per week: 5.

BU 156 Stenograph **3 s.h.**
Continuation of machine shorthand theory. Dictation speed to 80 words per minute and introduction to transcription.
Prerequisite: BU 155. Hours of class per week: 5.

BU 231 Shorthand and Transcription **3 s.h.**
Development of speed and accuracy in taking dictation of new material. Introduction to typewritten transcription.
Prerequisite: BU 132 or equivalent. Hours of class per week: 5.

BU 232 Shorthand and Transcription **3 s.h.**
Emphasis on improving transcription skills, spelling, punctuation, and grammar. Development of speed and accuracy in transcribing mailable letters on the typewriter.
Prerequisite: BU 231. Hours of class per week: 5.

BU 234 Typewriting — Advanced **3 s.h.**
This course continues the development of increased speed and accuracy with special emphasis on integrated office problems. Preparation of masters and stencils for duplication and instruction in the use of the electric typewriter is included.
Prerequisite: BU 134. Hours of class per week: 3.

BU 235-236 Office Practice **3 s.h. each semester**
A two-semester course in general secretarial procedure. Fundamental secretarial skills are emphasized including procedures for handling the mail, receptionist and telephone techniques, preparation of business reports, secretarial phases of communications and travel, filing procedures, and the use of duplicator and transcription equipment.
Hours of class per week: 3.

BU 238 Secretarial Seminar **1 s.h.**
Development of the charm and personality characteristics which the secretary needs for successful employment in the modern business world. Areas to be covered include posture improvement, good grooming, complexion care, cosmetic techniques, development of an effective speaking voice, the place of a girl in the business world, and analysis of job opportunities.
Hours of class per week: 2.

BU 255 Stenograph **3 s.h.**
Advanced theory and development of speed to 120 words per minute. Development of transcription skill.
Prerequisite: BU 156. Hours of class per week: 5.

BU 256 Stenograph **3 s.h.**
Development of machine shorthand speed to 150-200 words per minute. Emphasis on speed and accuracy in transcription.
Prerequisite: 255. Hours of class per week: 5.

HUMANITIES ENGLISH

EN 131 Composition **3 s.h.**
This course attempts to strengthen the individual's ability to express himself in the use of the English language and to improve upon the fundamentals previously learned. The student investigates essays and in turn investigates the methods of description, exposition, argumentation and narration. This course gives an overall review of the mechanics of English usage and emphasis is placed on effective writing. Outside readings are required and the student submits critical analyses as an aid in helping him develop style and technique as it is evidenced in the works of representative authors.
Hours of class per week: 3.

EN 132 Speech **3 s.h.**
This course attempts to introduce the students to the forms of public speaking and affords him the opportunity to practice both the formal and informal deliveries of speech. Individual expression and creativity are still the main tenets of this course. The course aims to enrich the student's ability to communicate. Emphasis is placed on the spoken word. Various forms of discourse are studied and put into practice. Outside readings are required and the student prepares critical evaluations. The student is also given the opportunity to work with panel and discussion groups.
Hours of class per week: 3.

EN 133 Reading **2 s.h.**
The course assists the student in strengthening the skills necessary for comprehension and expression. Much time will be devoted to individual assistance and problems, and remedies suggested. Reading techniques will be taught, reviewed, and strengthened.
Hours of class per week: 3.

EN 231 World Literature **3 s.h.**
The course surveys world literature from the Greek classics up to, but not including, 20th Century materials. The epic, the drama, the novel, the essay, and short stories will be studied. Outside readings are required to supplement the materials treated in the course.

The readings include selections from Homer, Sophocles, Plato, Virgil, Dante, Chaucer, Shakespeare, Milton, Hawthorne, and Swift.

Prerequisite: EN 131 (EN 132 desirable). Hours of class per week: 3.

EN 232 World Literature ^{II} **3 s.h.**

The course surveys world literature, beginning with a study of Melville and representative authors, including Flaubert, Dostoyevsky, Tolstoy, Twain, Conrad, Eliot, Faulkner, and Miller. Outside readings are required to supplement the materials treated in this course.

Prerequisite: EN 131 (EN 132 desirable). Hours of class per week: 3.

EN 233 American Literature ^I **3 s.h.**

A survey of American Literature from the Puritan period to the middle of the Nineteenth Century.

Prerequisite: EN 131 (EN 132 desirable). Hours of class per week: 3.

EN 234 American Literature ^{II} **3 s.h.**

A survey of American Literature from the middle of the Nineteenth Century to the present.

Prerequisite: EN 131 (EN 132 desirable). Hours of class per week: 3.

EN 235 Modern Drama (1 semester course) **3 s.h.**

To introduce the student to modern drama, from Ibsen to the present day, and to show that Modern American plays are strongly influenced by both world drama and theater. The course will emphasize such American playwrights as O'Neill, Hellman, Anderson, Odets, Wilder, Miller, and Williams. Some consideration will also be given to such European playwrights as Chekhov, Strindberg, Pirandello, Ionesco, and Genet. Emphasis will be placed on an appreciation of the meaning and the spirit of the plays. The student will see a current dramatic production. There will be individual conferences and a critical paper.

Prerequisite: EN 131 (EN 132 desirable). Hours of class per week: 3.

HU 251 Introduction to Philosophy **3 s.h.**

The course will introduce the student to both the philosophies and the philosophers who have contributed much to man's thinking. The range of the course will be from the writings of Plato to such as Santayana, Dewey, and William James.

Hours of class per week: 3.

HU 254 Logic and Argument **3 s.h.**

Although not a course in mathematical logic, the course begins with a careful study of propositional forms and set analysis, proceeding to an examination of linguistic and semantic problems to develop

skill in uncovering the thread of argument within the many strands of speech and writing. Fallacies, as well as cases of valid argument, are presented from diverse sources in political, economic, and social commentary. The roles of inductive and deductive reasoning in the discovery of new knowledge are analyzed.

Prerequisite: MA 150 or MA 153. Hours of class per week: 3.

MODERN LANGUAGES

FL 141-142 French ^{I, II} **3 s.h. each semester**

A beginner's course, covering the fundamentals of oral comprehension, oral expression, and grammar. Readings in French familiarize the student with the civilization of France.

Hours of class per week: 3.

FL 241-242 French ^{I, II} **3 s.h. each semester**

In this intermediate course the comprehension and use of the spoken language are studied, as well as its grammar and composition, and the cultural aspects of the language. Reading texts are chosen to enable the student to converse in idiomatic French and to awaken his interest in French literature.

Prerequisite: FL 142. Hours of class per week: 3.

FL 341-242 Advanced French ^{I, II} **3 s.h. each semester**

A review of grammar. Various types of French literature from the works of important authors; oral expression is stressed.

Prerequisite: FL 242. Hours of class per week: 3.

FL 143-144 Spanish ^{I, II} **3 s.h. each semester**

A beginner's course using the audio-lingual approach. The course gives the student a working knowledge of the essentials of grammar and the ability to read with reasonable facility. Graded readings supplement the text and serve as a basis for conversation.

Hours of class per week: 3.

FL 243-244 Spanish ^{I, II} **3 s.h. each semester**

The comprehension and use of the spoken language is further developed in this second year language course. Grammar, composition and the cultural aspects of the language are studied. Readings in Spanish introduce the student to Hispanic life and literature.

Prerequisite: FL 144. Hours of class per week: 3.

FL 343-344 Advanced Spanish ^{I, II} **3 s.h. each semester**

A review of grammar. A study of the history, culture and civilization of Spain as the background for the reading of literary selections by Spanish authors; oral expression is stressed.

Prerequisite: FL 244. Hours of class per week: 3.

FL 145-146 Elementary Russian ^{I, II} **3 s.h. each semester**

This course covers the fundamentals of grammar using an oral approach. Vocabulary building is stressed. Simplified readings are introduced in the second semester.

Hours of class per week: 3.

FL 245-246 Intermediate Russian ^{I 3 II} **3 s.h. each semester**
This course continues the study of Russian grammar. More conversation and reading are an integral part of each class to increase the student's facility with the language. Some composition is also introduced.

Prerequisite: FL 146. Hours of class per week: 3.

FL 147-148 Elementary German ^{I 3 II} **3 s.h. each semester**
A beginner's course stressing the conversational approach to the language. Essential grammar is studied and composition is introduced.

Hours of class per week: 3.

FL 247-248 Intermediate German ^{I 3 II} **3 s.h. each semester**
A review of grammar combined with the reading of selected works of contemporary German authors. Oral expression as well as composition is stressed.

Prerequisite: FL 148. Hours of class per week: 3.

ART AND MUSIC

AR 101 Art History

3 s.h.

Introduction to the history of art. A survey of world painting, sculpture, and architecture from prehistoric to present times. Emphasis will be placed on stylistic developments and appreciation of man's aesthetic achievements. Presentation will combine lecture, text, and visual materials.

Hours of class per week: 3.

AR 103 History and Literature of Music

3 s.h.

An appraisal of the art of music through directed listening with illustrations from significant composers. Enables student to understand music from various periods of history and the relationship to social and serious music. Required collateral readings.

Hours of class per week: 3.

MATHEMATICS

MA 050 Algebra

3 s.h.*

This course is designed to prepare students who have insufficient mathematics to pursue college mathematics. A modern approach to equations, fractions, factoring, quadratics, exponents and radicals, graphing, and right triangle trigonometry.

Hours of class per week: 3.

*Not credited toward the Associate Degree.

MA 150 Mathematics

3 s.h.*

A terminal mathematics course for the non-science oriented student, emphasizing the historical development and significance of

mathematics in modern society. Topics include: patterns, set theory, elementary logic and the reasoning process, number bases.

Hours of class per week: 3.

*3 semester hours credit will be granted only to students who have had insufficient background in mathematics and are candidates for the A.A.S. Degree. The course may not be counted for credit toward the A.A. or A.S. degree.

MA 151 Essentials of Mathematics

3 s.h.

This course is designed for students who have had only a minimum of high school mathematics. Systems of first and second degree equations, graphing of quadratics, ratio, proportion and variation, inequalities, elements of trigonometry are covered.

Prerequisite: MA 050 or one year of high school algebra.

Hours of class per week: 3.

MA 152 Trigonometry

3 s.h.

Topics covered include: angles and angle measurement, trigonometric functions, radian measure, identities, solution of plane triangles, logarithms, inverse functions, complex numbers, reduction formulas, and sum, difference, and product formulas.

Prerequisite: MA 151 or high school algebra. Hours of class per week: 3.

MA 153 College Algebra

3 s.h.

Topics covered include: logic, sets, axiomatic systems, functions, absolute values and inequalities, determinants, theory of equations, induction, sequences and series.

Prerequisite: MA 151 or 1½ years of high school algebra and trigonometry or Math 11. Hours of class per week: 3.

MA 155 Technical Mathematics

3 s.h.

This is an integrated course designed to provide mathematical foundations for students of technology. Topics include: slide rule, linear and quadratic solutions, graphing approximations, and the trigonometry of the right and oblique triangles.

Prerequisite: High school algebra. Hours of class per week: 3.

MA 156 Technical Mathematics

3 s.h.

A continuation of MA 155. Topics include: exponentials, logarithms, and cologarithms, graphs of the transcendental functions, vectors and the j-operator.

Prerequisite: MA 155. Hours of class per week: 3.

MA 157 Analytic Geometry and Calculus

4 s.h.

Topics include: Inequalities, relations and functions, limits, continuity, differentiation and integration of algebraic functions, and applications.

Prerequisite: MA 153 or 3½ years of high school mathematics or 3 years of high school mathematics and permission of the division.

Hours of class per week: 4.

SCIENCE AND ENGINEERING

BIOLOGY

4 s.h. each semester

BI 171-172 Biology \bar{I} \bar{II}

A comprehensive course stressing the molecular approach to the study of the origin of life, cells, physiology, heredity, and taxonomy. The laboratory provides the students with tangible evidence of scientific principles.

Hours of class per week: 3. Hours of lab per week: 2.

Lab fee: \$7.50 each semester.

BI 181 Anatomy and Physiology \bar{I}

3 s.h.

The study of anatomy and physiology stressing the structure of the vertebrate body with special references to that of man. Emphasis is placed on the evolutionary development of structure from the virus to man. Selected topics in physiology will also be discussed.

Prerequisite: SC 141 or BI 171 or permission of the instructor.

Hours of class per week: 2. Hours of lab per week: 2. Lab fee: \$7.50.

BI 182 Anatomy and Physiology \bar{I}

3 s.h.

The study of anatomy and physiology stressing the function of vertebrate organ systems with special reference to those of man. Emphasis is placed on the function of muscle contractions, metabolism, electrolytic balance, surface phenomenon, excitation, and conduction as they are related to the function in the organ system.

Prerequisite: BI 181. Hours of class per week: 2. Hours of lab per week: 2. Lab fee: \$7.50.

BI 271 Zoology — Invertebrate

4 s.h.

The course investigates activities of life in light of mechanistic views, stressing the experimental approach and the relation to other fields of physiology. Topics under consideration include biochemistry, structure, function, and organization of the cell as seen in Major Phyla.

Prerequisite: BI 171-172. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.

BI 272 Zoology

4 s.h.

This course is primarily an investigation of the physical basis of heredity, including such topics as mitosis, meiosis, differentiation, Mendelian concepts, including modifications due to incomplete dominance, linkage, crossing over and other recombination possibilities. Topics from human genetics, evolution, and gene-enzyme relationship will also be stressed.

Prerequisite: BI 171-172. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.00.

4 s.h.

MA 158 Analytic Geometry and Calculus \bar{I}

Topics include: the analytic geometry of conics, differentiation and integration of transcendental functions, polars, methods of integration, and applications.

Prerequisite: MA 157. Hours of class per week: 4.

MA 159 Mathematics of Finance

3 s.h.

Open to liberal arts and selected business students. Topics include: simple interest and discounts, partial payments, mark up, depreciation method, negotiable instruments, stocks and bonds, annuities, life insurance, taxes, and payroll mathematics.

Prerequisite: MA 151 or 1½ years of algebra. Hours of class per week: 3.

MA 252 Finite Mathematics

3 s.h.

A course designed for students who desire a firm foundation in many models of mathematical structure. Topics covered include: number systems, groups, rings, fields, congruence, matrices, determinants, vectors, Boolean Algebra, number bases, foundations of statistics.

Prerequisite: MA 153. Hours of class per week: 3.

MA 255 Technical Mathematics \bar{I}

4 s.h.

A continuation of MA 156. Review of analytic geometry of the straight line and conic sections, differentiation, curve sketching, maxima and minima, time rates, implicit functions, anti-differentiation, and applications are covered.

Prerequisite: MA 156. Hours of class per week: 4.

MA 256 Technical Mathematics \bar{II}

4 s.h.

A continuation of MA 255. Topics covered include: the definite integral, integration techniques, areas, volumes, moments of inertia, areas of surfaces of revolution, curve acceleration, Fourier series, and applications.

Prerequisite: MA 255. Hours of class per week: 4.

MA 257 Analytic Geometry and Calculus

4 s.h.

Topics include: vectors in E_2 and E_3 , volumes, centroids, elements of solid analytic geometry, indeterminate forms, convergence, Taylor's Theorem with remainder; partial differentiation, and applications.

Prerequisite: MA 158. Hours of class per week: 4.

MA 258 Topics in Calculus

4 s.h.

Topics include: multiple integration, selections from differential equations and linear algebra, vector spaces, Eigenvalue problems, and applications.

Prerequisite: MA 257. Hours of class per week: 4.

BI 282 Microbiology

This course in microbiology stresses the relationship of pathogenic organisms to other life. The physiology and the structure of bacteria and viruses are stressed. Experimental evidence of pathogens is presented in the laboratory.

Prerequisite: BI-172 or permission of the instructor. Hours of class per week: 2. Hours of lab per week: 3. Lab fee: \$7.50. *Students seeking 4 s.h. will take an additional one hour recitation each week. Permission of the instructor is required.

3 of 4 s.h.*

CHEMISTRY**CH 173-174 Fundamentals of Chemistry 4 s.h. each semester**

A course in general chemistry designed for the liberal arts student; stressing a "principles" approach to such topics as chemical bonding, states of matter, thermodynamics, and periodic classification in laboratory and lecture.

Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$7.50.

CH 175 College Chemistry with Qualitative Analysis 4 s.h.

A course in the fundamentals of chemistry, including a rigorous approach to thermodynamics. The course outline of The American Chemical Society's Advisory Council on College Chemistry is closely followed. Topics covered include: atomic theory, the Periodic Law, the Kinetic Theory as applied to the states of matter, the chemical bond, and solutions. The laboratory consists of typical physico-chemical experiments which closely follow the lecture material.

Prerequisite: 3 years of high school mathematics or college algebra, high school chemistry and/or physics helpful. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$7.50.

CH 176 College Chemistry with Qualitative Analysis 5 s.h.

A continuation of Ch 175 with more emphasis on laboratory work which consists of semi-micro qualitative analysis. Topics covered in the second semester include: chemical equilibrium, kinetics, electro-chemistry, selected representative families from the Periodic Classification, nuclear chemistry, and selected topics from organic chemistry.

Prerequisite: CH 175. Hours of class per week: 3. Hours of lab per week: 4. Lab fee: \$7.50.

CH 181 Nursing Chemistry

3 s.h.

This basic course stresses the fundamentals of inorganic, organic, analytical and pharmaceutical chemistry. A historical and philosophical as well as subject matter approach is used.

Prerequisite: 1 year of high school science. Hours of class per week: 2. Hours of lab per week: 2. Lab fee: \$7.50.

CH 221 Organic Chemistry

4 s.h.

An integrated course treating aliphatic and aromatic organic compounds from a structural approach. Reaction mechanisms and kinetics are stressed. The laboratory is designed to familiarize the student with basic techniques of organic chemistry. Some of the topics include: alkanes, alkenes, alkynes, cyclic aliphatic hydrocarbons, benzene, resonance, electrophilic aromatic substitution, alcohols, alkyl and aryl halides.

Prerequisite: CH 174 or CH 176. Hours of class per week: 3. Hours of lab per week: 3. Lab fee: \$10.

CH 222 Organic Chemistry

5 s.h.

A continuation of CH 221 with additional laboratory emphasis on classical syntheses. Topics covered include: ethers and epoxides, carboxylic acids, amines, aldehydes, ketones, carbohydrates, polynuclear aromatics, and heterocyclics.

Prerequisite: CH 221. Hours of class per week: 3. Hours of lab per week: 6. Lab fee: \$10.

ELECTRICITY AND ELECTRONICS**EL 121 Electricity**

4 s.h.

This first course in the Electrical Technology curriculum investigates the concepts of current, voltage and power as applied to D.C. network analysis. The nature of resistance, inductance, and capacitance is also studied. The fundamental laws of electric circuits and the nature of magnetic circuits are also covered.

Prerequisite: High school algebra. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.

EL 122 Electricity

4 s.h.

This course investigates the nature of alternating current circuits including the application of complex wave forms. Reactance, impedance, resonance, and circuit analysis of various networks are studied. Power relationships, transformers, and three phase systems are also investigated.

Prerequisite: EL 121. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.

EL 221 Electronics

4 s.h.

This course covers electron tubes and semi-conductors including static and dynamic characteristics of vacuum tubes, cathode ray tubes, crystal diodes, semi-conductor power rectifiers, transistor types, silicon controlled rectifiers, power transistors, single phase rectifiers, and power supply filters. Class A amplifiers, RC and transformer coupling, direct-coupled, push-pull, and feedback amplifiers are also studied.

Prerequisite: EL 122. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.

EL 222 Electronics**4 s.h.**

This course in electronics covers the various classes of amplifiers including R.F. amplifiers. Other topics include oscillators, modulation and demodulation, wave shaping currents, gaseous conduction, power rectification, magnetic amplifiers, and light sensitive devices. Particular mention is made of communication systems and microwave devices.

Prerequisite: EL 221. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.

EL 223 Electric Machines**3 s.h.**

Electric Machines 223 is concerned with the operation and construction and characteristics of AC and DC machinery, including the transformer, winding geometry, armature reaction, starting methods, speed control, ratings of both single phase and multiphase rotating machinery.

The testing, rating, connection of both current and voltage transformers and their vector diagrams are also studied.

Prerequisite: EL 122. Hours of class per week: 3.

EL 224 Electric Machines**3 s.h.**

This course in electric machines is a continuation of EL 223 dealing with the study of industrial control applications of electric machines. Methods of speed control, dynamic braking, parallel operation of machines, and single phase motors will be stressed. The application of these devices to the servo-mechanism system will be introduced by simultaneous study of control system parameters and characteristics.

Prerequisite: EL 223. Hours of class per week: 3.

EL 225 Analogue Computers**2 s.h.**

Modern computing systems are approached through a survey of their evolutionary development and their basic elements. Operational principles of electronic computing devices and circuits capable of performing arithmetic operations and function generation are investigated in detail. Use of these devices is presented in the actual programming and use of analogue computing systems, including amplitude and time scaling as applicable to solution of simultaneous algebraic and time dependent equations.

Prerequisite: EL 122. Hours of class per week: 2.

EL 226 Digital Computers**2 s.h.**

This course is a continuation of EL 225 as related to digital computer systems. The electronic digital computer is studied by investigation of applicable number systems and related arithmetic operations, Boolean algebra, and the characteristics of digital signals. Study of circuitry and operational units includes magnetic devices, counters, adders, registers, logic circuitry, memory systems, input and output sections, and computer control with brief mention of programming.

Prerequisite: EL 225. Hours of class per week: 2.

EL 227 Instrumentation**1 s.h.**

Instrumentation EL 227 provides the electrical student with an appreciation for the operational principles of various measurement and laboratory devices. Study of the oscilloscope, error propagation due to uncertainties, resistor coding, meter movements, and construction of the VOM and the VTVM is included.

Prerequisite: EL 122 and Physics 176. Hours of class per week: 1.

EL 228 Instrumentation**1 s.h.**

This course is a continuation of EL 227 and concerned with the study of A.C. and D.C. bridge circuits, the operation of basic electrical sensors, and the study of various types of tube and transistor testing instruments. Other topics covered include test methods applicable to audio and radio frequency circuits.

Prerequisite: EL 227. Hours of class per week: 1.

GRAPHICS**MD 171 Engineering Graphics****3 s.h.**

The course covers drafting work in lettering, use of drawing instruments including the drafting machine and parallel straight edge, geometrics, orthographic projection, cross sections, axonometric projection, intersections and sketching.

Hours of class per week: 3.

MD 172 Engineering Graphics**3 s.h.**

Course covers development, detail and assembly drawings, screw thread work, production, dimensioning, charts and graphs, and gearing.

Prerequisite: MD 171. Hours of class per week: 3.

MD 175 Electrical Graphics**3 s.h.**

Course covers basic drafting including orthograph projection geometrics, cross sections, axonometric projection, electrical symbols, and schematic drawings.

Hours of class per week: 3.

MD 176 Electrical Graphics**3 s.h.**

Course covers intersections, development, detail and assembly drawing, screw threads, piping diagrams, graphs and charts, and gears.

Prerequisite: MD 175. Hours of class per week: 3.

PHYSICS**PH 131 Engineering Physics — Mechanics****4 s.h.**

Vectors, forces, equilibrium, analysis, centroid, kinematics, kinetics, centrifugal force, work and energy, impulse and momentum, rotation, elasticity, hydrostatics, pressure and hydrodynamics are covered.

Prerequisite: High school chemistry, physics, mathematics through trigonometry, and concurrent registration in MA 157. Hours of class per week: 3. Hours of lab per week: 3. Lab fee: \$10.

PH 132 Engineering Physics—Heat, Light, Sound 4 s.h.
Thermometry, calorimetry, heat transfer, thermodynamics, Carnot cycle, gas laws, Dalton's principle, wave theory, sound ranging, strings, Melde's Law, elastic-mediums, harmonics, pipes, bars, illumination, reflection, refraction, lenses, optical instruments, color, interference, diffraction, and polarization are covered.

Prerequisite: PH 131 and concurrent registration in MA 158. Hours of class per week: 3. Hours of lab per week: 3. Lab fee: \$10.

PH 175 Physics † 4 s.h.
Topics included in the course are: mechanics of particles, rigid bodies, sound and wave motion, fluids, and atomic and molecular structure.

Prerequisite: High school algebra. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.

PH 176 Physics † 4 s.h.
Topics included in the course are: heat and thermodynamics, electricity and magnetism, optics, and modern physics.

Prerequisite: PH 175. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.

PH 177-178 College Physics I, II 4 s.h. each semester
The first semester stresses the fundamentals of mechanics, fluids, heat, and wave motion. The second semester includes the study of electricity and magnetism, optics, and atomic and nuclear physics.

Prerequisite: High school physics and mathematics through trigonometry and concurrent registration in MA 157-158. Hours of class per week: 3. Hours of lab per week: 2. Lab fee: \$10.

PH 231 Engineering Physics—Electricity and Magnetism 4 s.h.
Electrostatics, Coulomb's Law, field strength, potential, potential difference, current and resistance, Ohm's Law, direct current circuits, alternating current, capacitance, electronics, electrochemistry, instruments, induction, and capacitance are covered.

Prerequisite: PH 132 and concurrent registration in MA 257. Hours of class per week: 3. Hours of lab per week: 3. Lab fee: \$10.

PH 232 Engineering Physics—Modern 4 s.h.
Introduction to atomic physics, radioactivity, electron and nuclear masses, quantum physics, photoelectric and Compton effects, Bohr theory of atomic structures, X-rays, neutrons, electron and ion accelerators, nuclear reaction, nuclear fission and atomic energy are covered.

Prerequisite: PH 231. Hours of class per week: 3. Hours of lab per week: 3. Lab fee: \$10.

PH 235 Engineering Mechanics—Statics 3 s.h.
Analytical and graphical analysis of force systems, moments, couples, resultants, simple structures and trusses. Equilibrium of force systems, friction, kinematics of particles and rigid bodies, displacement, velocity, acceleration, and rectilinear motion.

Prerequisite: PH 131. Hours of class per week: 3.

PH 236 Engineering Mechanics—Dynamics 3 s.h.
Motions of particles and rigid bodies and the force systems causing these motions, force, mass, and acceleration, work and energy, impulse and momentum.

Prerequisite: PH 235. Hours of class per week: 3.

SCIENCE

SC 141 Introductory Biology † 3 s.h.
Principles of classical biology, the structural and functional characteristics of living material, metabolism, origin of life, comparative anatomy, and taxonomy.

Hours of class per week: 2. Hours of lab per week: 2. Lab fee: \$5.

SC 142 Introductory Biology † 3 s.h.
Topics in areas of modern biology of immediate importance. Topics in physiology, genetics, evolution, ecology and medicine.

Hours of class per week: 2. Hours of lab per week: 2. Lab fee: \$5.

SC 143 Physical Geology 3 s.h.
The course includes a thorough study of topographic maps, glaciation, erosion, and vulcanism.

Hours of class per week: 3. Hours of lab per week: 1. Lab fee: \$7.50.

SC 144 Historical Geology 3 s.h.
A comprehensive study of the geological time scale, emphasizing paleogeography and paleontology, together with a short review of the principles of stratigraphy.

Prerequisite: SC 143. Hours of class per week: 3.

SC 165 Physical Science —PH 157-158 3 s.h.
An historical approach to selected topics from classical physics such as Newtonian mechanics and astronomy as related to modern concepts of the universe. An emphasis is placed on the relationship of these concepts to the modern world.

Hours of class per week: 2. Hours of lab per week: 2. Lab fee: \$5.

- SC 166 Physical Science** - CHEM 3 s.h.
 An historical approach to chemistry, with an emphasis on the development of modern concepts such as the kinetic molecular theory and atomic theory, as well as the reasons for and the development of the periodic system. Selected topics on local historical geology will also be covered.
 Hours of class per week: 2. Hours of lab per week: 2. Lab fee: \$5.

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**SOCIAL SCIENCE
 ECONOMICS**

- SS 181 Economics** I 3 s.h.
 A sequential course, and it should be elected by all business majors, except those majoring in secretarial science. Fundamental principles and concepts of economics in production, exchange, and distribution. Study of basic institutions and major problems of our economy.
 Hours of class per week: 3.
- SS 182 Economics** II 3 s.h.
 A continuation of SS 181, and should be elected by all business majors, except those majoring in secretarial science. Analysis of national income, banking, government finance, labor relations, agricultural problems and international trade.
 Prerequisite: SS 181. Hours of class per week: 3.

HISTORY

- SS 183 Modern Western Civilization** I 3 s.h.
 An introductory course in Western Civilization beginning around the tenth century. The course examines the major social, political, and economic ideas and their contributions to the western heritage.
 Hours of class per week: 3.
- SS 184 Modern Western Civilization** II 3 s.h.
 Follows the same basic plan as SS 183 and is a continuation of that course to the present. The course enables the student to identify contributions made to the western heritage, changing patterns of power in the western world and their implications for the future.
 Hours of class per week: 3.
- SS 185 History of Ancient Civilizations** 3 s.h.
 A study of ancient peoples with special emphasis upon the culture developed in the Near East, Rome, and Greece.
 Hours of class per week: 3.

- SS 283 Survey of American History** I 3 s.h.
 A survey of the political, social, and intellectual development of the United States from the Colonial period to post-Reconstruction.
 Hours of class per week: 3.
- SS 284 Survey of American History** II 3 s.h.
 A continuation of SS 283 from Reconstruction to the present. Emphasis is placed on the changing character of the American Society and its role in international affairs.
 Hours of class per week: 3.

- SS 285 The Soviet Union** 3 s.h.
 A study is made of the social, political, and economic conditions in Czarist Russia prior to the 1917 Revolution to establish a common background. Emphasis is placed on a study of the Soviet Union since the Bolshevik Revolution with special examination of Marxism, the Soviet government, the Communist Party, and the Soviet Union in international affairs.
 Prerequisite: SS 183 and SS 184. Hours of class per week: 3.
- SS 286 Twentieth Century Europe** 3 s.h.
 The course begins with a study of the Treaty of Versailles and stresses the major political, social, economic, and intellectual movement and reactions to them in England, France, Germany, Italy and the Soviet Union.
 Prerequisite: SS 183 and SS 184. Hours of class per week: 3.

POLITICAL SCIENCE

- SS 282 Introduction to American Government** 3 s.h.
 This introductory course supplies the factual information about the structure and procedures of American government. The course gives the student an opportunity to examine the effectiveness of the American political record as tested by democratic principles.
 Prerequisite: Permission of instructor. Hours of class per week: 3.
- SS 287 International Organizations** 3 s.h.
 Emphasis is on an examination of international organizations with primary consideration of the United Nations. This involves a study of the major crises which have confronted the United Nations since its establishment and those which it presently faces, the use of the veto; the specialized agencies; and the constitutional and political issues involved in the question of Chinese membership. A one-day field trip to the United Nations in New York City is required.
 Prerequisite: SS 183 and SS 184. Hours of class per week: 3.

PSYCHOLOGY

- SS 291 General Psychology** 3 s.h.
 A basic orientation in the psychology of human behavior is pro-

vided. A study of the aims and methods of psychological investigation, the inter-relationships of heredity and environment as determiners of behavior, and the structure and function of the human nervous system is included, as well as an investigation of learning, motivation, and the nature of emotion.

Hours of class per week: 3.

SS 294 Applied Psychology

3 s.h.

This course explores the field of psychology with reference to applications in human affairs. The importance of drives and motives, and the influence of education and experience on the development of the individual is stressed. The role of psychology in such fields as mental health, vocational adjustment, social relations, advertising, law and industry is given special emphasis.

Prerequisite: SS 291. Hours of class per week: 3.

SOCIOLOGY

SS 281 Introduction to Sociology

3 s.h.

An introductory course designed to acquaint the student with the study of sociology as one of the sciences that deals with man in his relationships with the members of his society and the world in which he lives. The methods and objectives of sociological research, the varying patterns of social organization, and the study of society in relation to individual and group behavior are major areas of study.

Hours of class per week: 3.

SS 381 Social Problems

3 s.h.

An attempt to explore our rapidly changing society through the sociological analysis of significant social problems including juvenile delinquency, adult crime, organized gambling, alcoholism, drug addiction, personality disorders, suicide, marital problems, and discrimination. The course will attempt to introduce theory and methods for studying social problems and techniques for understanding and coping with these problems.

Prerequisite: SS 281 and instructor's permission. Hours of class per week: 3.

PHYSICAL EDUCATION

PE 131-132 Physical Education 1 + 1 1 s.h. each semester*

A variety of physical activities will be scheduled based on the needs and interests of the student and the facilities available. Included will be golf, bowling, tennis, badminton, volley ball and weight training. Several lectures covering weight reduction, ergogenic effects on physical performance; the effects of exercise on the various systems of the body will be included.

Prerequisite: Satisfactory medical exam. Hours of class per week: 2.
*Credits may not be included in the 60 semester hours offered for the Associate Degree.

STATE UNIVERSITY OF NEW YORK

OFFICE OF THE PRESIDENT

8 Thurlow Terrace

Albany, N. Y. 12201

UNIVERSITY CENTERS

State University at Albany
State University at Binghamton
State University at Buffalo
State University at Stony Brook

MEDICAL CENTERS

Downstate Medical Center at Brooklyn (New York City)
Upstate Medical Center at Syracuse

COLLEGES OF ARTS AND SCIENCE

College at Brockport
College at Buffalo
College at Cortland
College at Fredonia
College at Geneseo
College at New Paltz
College at Oneonta
College at Oswego
College at Plattsburgh
College at Potsdam
(Two additional Colleges of Arts and Science have been established in Westchester and Nassau Counties. In the early stages of development, they are expected to accept first classes in 1970.)

SPECIALIZED COLLEGES

College of Forestry at Syracuse University
Graduate School of Public Affairs at Albany
Maritime College at Fort Schuyler (Bronx)
College of Ceramics at Alfred University
College of Agriculture at Cornell University
College of Home Economics at Cornell University
School of Industrial and Labor Relations at Cornell Univ.
Veterinary College at Cornell University

AGRICULTURAL AND TECHNICAL COLLEGES (Two-year)

Agriculture and Technical colleges at:

Alfred	Delhi
Canton	Farmingdale
Cobleskill	Morrisville

COMMUNITY COLLEGES (Locally-sponsored two-year colleges under the program of State University)

Adirondack Community College at Hudson Falls
Auburn Community College at Auburn
Borough of Manhattan Community College at New York City
Bronx Community College at New York City
Broome Technical Community College at Binghamton
Corning Community College at Corning
Dutchess Community College at Poughkeepsie
Erie County Technical Institute at Buffalo
Fashion Institute of Technology at New York City
Fulton-Montgomery Community College at Johnstown
Hudson Valley Community College at Troy
Jamestown Community College at Jamestown
Jefferson Community College at Watertown
Kingsborough Community College at Brooklyn
Mohawk Valley Community College at Utica
Monroe Community College at Rochester
Nassau Community College at Garden City
New York City Community College of Applied Arts and Sciences at Brooklyn
Niagara County Community College at Niagara Falls
Onondaga Community College at Syracuse
Orange County Community College at Middletown
Queensborough Community College at New York City
Rockland Community College at Suffern
Staten Island Community College at New York City
Suffolk County Community College at Selden
Sullivan County Community College at South Fallsburg
Ulster County Community College at Kingston
Westchester Community College at Valhalla

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